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(54) Title: REDUCTION OF PEROXIDATIC AND CATALATIC INTERFERENCE WITH ASSAYS OF PEROXIDATIC ACTIVITY

(57) Abstract

Described are mild reagents and gentle methods for inactivating background peroxidatic activity in a test sample before analysis by a peroxidase-linked specific binding assay. Reagents are provided which inactivate plant peroxidases, hemoglobin, methemoglobin, metmyoglobin, leucocyte peroxidases, hematin, and iron salts, individually or in combination. Also described are improved methods for detecting the presence of blood or the occurrence of hemolysis in a test sample, which use specific inactivating reagents or unique assay reaction kinetics to distinguish hemoglobin and methemoglobin from other peroxidatic catalysts potentially present in a test sample. The invention provides simple methods for blocking catalase interference with either the background-reduction reactions described above or the assay of peroxidatic activity, and for stopping signal generation in solid-phase assays of the peroxidatic activity of hemoglobin, methemoglobin, or plant peroxidases. The invention includes a method for using the specific and permanent inactivation of plant peroxidases to permit serial probing of a test sample for different analytes in a peroxidase-linked specific binding assay.